Vol. 5 No. 12 Dec. 1988

Layton Atari Computer Enthusiasts

L.A.C.E.

400 800 600XL 800XL 1200XL 65XE 130XE 520ST 1040ST MEGA ST

MERRY CHRISTMAS

L.A.C.E. The monthly publication for the Atari Computer owner. Designed to assist the Atari user in the use and enjoyment of their ATARI computer and accessories

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president's pen

- Jerry Kennedy -

The Christmas holiday is upon us again which gives us the opportunity to enjoy our family and friends and to express the love and appreciation we have for them. I would like to take this opportunity to thank you, the members of L.A.C.E. for the successfull year we have had.

The time is here again to elect new officers for the coming year. We need the help of all the members if we are to get the most out of our club in the coming year. Don't be afraid to use your talents, knowledge, to make another great year for our club.

Again we would like to thank Don Smith and the members who helped with this newsletter.

Shawn Hart, with the help of his friends, showed us that with a little imagination there is no limit to the use of our computers. The fencing demonstration illustrated the capabilities of the ATARI and I'm sure provoked a lot of interest in the individual sport of fencing.

This month we are going to take time to see what enjoyment we can get out of our ATARIs with games, prizes, and a special vist from the bearded one. Don't miss it, bring the whole family. You will also be given the chance to give your input for the coming year.

SEE YOU THERE!

Jerry Kennedy

EDITORIAL MESSAGE:(plea)

Since this is a the end of another year for the club it would be nice to see all members make one last effort to attend this meeting. As a club it is nessacary for the members to show up for the elections. Without the members available there is not much reason to have an election since there will be no votes to count.

On a sad note I have to inform you that due to a national emergency I have to be out of town for this meeting. I really hate to miss a Christmas since I know we will have a visit from the the big Jolly guy and I will miss out on all the gifts and will miss getting to take part in our last meeting for this year. Also on the sad note I would like to take these few lines to thank Pat Johnson for all her effort this year. As you may not know Pat has been transfered to Ohio to chase her dreams there. We will miss having her smiling face at the meetings and having someone that can keep the books straight. Good luck Pat and keep in touch.

Again please make an extra effort to make this months meeting as we hope to make it entertaining to one and all.

!HO HO HO!

Don Smith

8 Bit
TID BITS

****Press Release****

Innovative Concepts (I.C4.) 31172 Shawn Drive Warren, MI 48093 CompuServe: 76004,-1764 Phone: (313) 293-0730

Note: The following NEW products, will be available for sale, starting November 11, 1988 (advance orders are welcomed).

The **XF35 Kit** --For Atari XF551 owners, now it's EASY to upgrade your set-up, to use the newer 3.5" drive! Allows you to store up to 720K on each disk! Fully tested, to work with: MyDOS, SpartaDOS (ICD), and the new SpartaDOS X cartridge (ICD), in the 720K (80 tracks/side) format. And, 40 track formats are still available, for use with most other DOS's. Also, the high speed skewing is still available to use, in the upgrade ROM.

Kit includes: Installation/User instructions, Upgrade ROM, and all required connecting cables. Note: To allow for easier access, the XF551's - 34 pin connector (J4), is desoldered, and replaced with a 34 pin header connector. NO other soldering/desoldering is required. And, NO trace cutting to perform. Everything else, is "just plug ins"! Note: The 3.5" drive mechanism, and it's mounting bracket, are not included in this kit. (see below)

Price: $34.95 (+ $3.00 S&H)

Note: A COMPLETE conversion kit, including all of the above, PLUS: A High Quality - 3.5" 720K drive mechanism, mounting bracket, with the SpartaDOS Construction Set (ICD), are also available. Call or write, for more details.

The IC Chip ----Now, Atari 1050 owners with the Happy Board installed (original or clone), can now boot-up SpartaDOS skewed disks, WITHOUT having to go into the U.S. Emulation Mode anyore! A REAL time-saver! Automatically adjusts to U.S. Emulation mode, when a program or utility, is "looking" for a U.S. Doubler (ICD), such as SpartaDOS or CopyMate 4.4 (an excellent sector copier). Includes: Instructions, Upgrade ROM, and 2 disks (both sides), full of Happy-type programs and utilities.

Note: Just as before, you still CANNOT format U.S. sector skewed disks. However, you can still read and write to

them. All other Happy functions, are still available.

Installation, is just a matter of unplugging the Happy 1050 Board's ROM, and installing this new one. NO soldering, desoldering, or trace cutting required!

Price: $29.95

Also, see our current catalog, for our Immitator Controllor, which is another great add-on, for the Happy 1050 Board (original only).

Ramdrive + 192K -Due to the current high cost of 41256 DRAMS, we at I.C. now have a low-cost, 192K memory upgrade (total), for the Atari 130XE. Best of all, unlike other memory upgrades, you do NOT loose the 130XE's Extended Antic modes! ALL 130XE type software (like Typesetter and Planatarium) run as normal! With the extra 64K of RAM, you can:

With the included instructions, you can set-up Atariwriter + (under SpartaDOS 2.3x/3.2x), for it's 3 main programs (AtariWriter+, Proof Reader, and Mail merge) to run from a ramdisk!

Includes ramdisk handlers, to set-up a 707 sector (single

I Touched a Turbo-816!

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On Saturday, November 5th, 1988, the Turbo-816 was shown for the first time at the Mid-Ohio Atari Users Group (MAUG). It was announced before hand, in the MAUG newsletter, that the Turbo-816 would be demoed, and that interested parties should bring any software that they wanted to test out on it. Chuck Steinman of Dataque was on hand to to answer questions pertaining to the Turbo-816.

The Turbo-816 is a new product being developed by Dataque that is basically a replacement for the CPU and operating system. It replaces it with 16-bit CPU and an operating system that maintains compatibility with existing software and also make use of the special 16-bit mode. Two Atari XL's were on hand for these particular demos. One being a stock machine, and the other equipped with the Turbo-816.

Chuck pointed out that the new operating system is now fully functional, but not fully optimized. Thats to say that there are still some routines that need to be rewritten to get the most power out of the new

65816 CPU. The floating-point routines in the Turbo-816 machine had been partially optimized for 16-bit mode. The demos here run on each machine, and the timed results were compared.

The first demo resulted in four different mathematical equations being plotted to the screens. When the timing results were compared, it was found that the stock XL took 256.783 seconds, and the Turbo-816 machine took 24.049 seconds. Chuck pointed out that when the drawing routines are optimized, that there will be an even more dramatic increase in speed.

The second demo was a test of the various math functions of basic and the operating system. The only screen output generated was the printing of the timed results. Each math function was interated 1000 times.

Cartridge basic was used on the Turbo-816, since this machine was a prototype. Chuck then allowed MAUG members to test out the Turbo-816 with any software they wanted to try. Testing for compatibility with existing 8-bit software was the purpose of this. SynCalc ran just fine, as did PaperClip ver.1.2 64k.

Oddly enough, PaperClip ver.2.0 128k didn't recognize that there was 256k of ram available. Chuck said that he was working on it, and that programs that use banked memory will be fully supported by the Turbo-816. Game cartridges were also tested. These included Atlantis, Pac Man, Astro Chase, Submarine Commander, and Alien Garden. These worked just fine. From my own personal observations, some games actually seemed to be more responsive to the joystick, enhancing playability. Two cartridges from Spinnaker would not work. These were Adventure Creator, and Delta Drawing.

Chuck said that in his own testing he found AtariWriter, AtariWriter+, and Pole Position worked just fine. After testing these software titles for compatibility, things settled down to a general question and answer session. Chuck said that in the future he hopes that the Turbo-816 operating system will be combined with a graphics interface into a single rom. Static ram will probably the used for the new ram expansion. The new linear addressing range is up to 16 megs! The new ram

will be on the expansion bus, and will be internal up to either 256k or 512k. After that, an external expansion box would be necessary. Keep in mind that this ram would be used for executable code. Generally we are now limited to around 40k of executable program code that can be in the computer at one time. This ram will be fast ram, with no wait states caused by either ANTIC stealing memory cycles, or ram refresh cycles that dynamic ram chips require.

The question was raised about how programmers are supposed to make use of the 65816, since there aren't any assemblers especially made for it. Chuck said that it is easy to make macro extensions for use with either AMAC or MAC/65.

In addition to reporting about the first public demonstration of the TURBO -816, here are a few technical details of the 65816 cpu....

In many ways, the 65816 stands in relation to the 6502 as the 8086 stands to the 8080. First, it has a 16-bit data bus, but an 8-bit internal data bus. This means that all 16-bit memory accesses take two clock cycles, effectively reducing its potential speed by a fact of two. Second, the register structure of the 65816 closely expands upon that of the 6502, in that all the 8-bit registers have been extended to 16-bits.

In addition, a new register, called the direct-page register (D), has been added; it allows quick access (like to page zero) to any 256-byte page in the first 64k of the address space.

One big improvement in the register structure is that the stack pointer is now sixteen bits, so the stack can be located anywhere in the first 64k of the address space. And it can have a depth greater than 256 bytes. The mode (native or 6502 emulation) is set by a new bit (M) in the processor status register. Several new instructions (SEP and REP) allow you to manipulate individual bits in the status register.

Address modes available include all the original 6502 modes, the NCR 65C02 modes, and Rockwell's additional 65C02 mode, as well a eight new 65816 modes. The 65816 has the three hardware interrupts of the 6502 (RESET, NMI, andRQ), and a new one, called ABORT, which may be used to implement airtual-memory system. As in the 6502, the interrupt vectors are located in the

highest locations of the first 64k of memory.

Software interrupts include the old BRK instruction, as well as a new COP instruction, used for interfacing a co-processor IC. In addition, two instructions adapted from the 6800 family, WAI (wait) and STP (stop), halt the processor until a hardware interrupt occurs (NMI or IRQ), or until the processor is reset, respectively.

MAUG members would like to thank Chuck Steinman of Dataque for giving us the first

Atari 1200XL Split Chroma Modification by Charles D. Koontz

This easy modification to the 1200XL provides a true chroma output to the 1200XL monitor jack. It allows the use of "split video" monitors for sharper images and truer color.

This modification involves installation of one wire to the foil side of the 1200XL main circuit board (motherboard).

This modification is installed at the risk of the user. Any warranty on the 1200XL will be invalidated. The author assumes no responsibility for damage done during, or by, the modification.

EQUIPMENT REQUIRED:

(1) Screwdriver – Phillips head
(1) Screwdriver – blade
(1) Soldering iron & solder
(1) Wire cutter or knife

THE MODIFICATION

1. Disconnect all power, TV, stick, paddle, drive, MIO, etc. from the 1200XL.

2. Turn the 1200XL upside down on your work surface.

3. Remove the six Phillips head screws securing the bottom of the 1200XL to its top.

4. Carefully holding top and bottom together, turn the unit upright. Move the top away from you, exposing the keyboard ribbon cable connectors.

5. Make a note of the mating polarities of the keyboard ribbon cable and its connector.

6. Push the keyboard connectors away from you, disconnecting the top and keyboard from the motherboard.

7. Remove the top (and keyboard) assembly and lay it aside.

8. Remove six Phillips head screws which secure the motherboard to the bottom shell.

9. Remove the left plastic cartridge and joystick frame and lay it aside.

10. Remove the motherboard from the plastic bottom shell. Lay the bottom shell aside.

11. Using a flat blade screw-

driver, gently pry up eleven "pop" fasteners that secure the top and bottom shields to the motherboard.

12. Position the motherboard in front of you just as it would be if it were still in the 1200XL.

13. Find transistor Q19 in front of, and slightly to the right of, the large upright cylindrical electrolytic capacitor (C39) at the right rear of the motherboard.

14. Just to the left of Q19 is capacitor C118. The left lead of C118 is where the chroma signal appears. Find its connector on the foil side of the circuit board and solder one end of an insulated hookup wire to it.

15. Before cutting the other end of the wire to length, carefully route it so it will fall under one of the elevated areas of the bottom shield edge when the shield is replaced. The other end of the wire must reach pin 5 of the monitor output jack J2.

16. Solder the other end of the hookup wire to pin 5 (the unused connector) of the monitor output jack J2.

17. Carefully re-position the top and bottom shields on the motherboard, making sure the new wire is not pinched by the shield edge and the insulating sheet is in place under the bottom shield.

18. Fasten the shields to the motherboard by pressing the eleven "pop" fasteners into place. WARNING - BE CAREFUL NOT TO CUT YOURSELF ON THE SHIELD EDGES.

19. Position the motherboard in the plastic bottom shell. Position the left plastic cartridge and joystick frame in place.

20. Fasten the motherboard to the bottom shell with six Phillips head screws.

21. Position the keyboard and top unit on top of, and slightly to the rear of, the bottom.

22. Reconnect the two ribbon connectors from the keyboard to the motherboard.

a. Large black connector is fastened without twisting its short ribbon cable. b. Small black connector is fastened with the red stripe on its small grey ribbon cable to your left.

23. Move the top unit into position over the bottom.

24. Holding the top and bottom together, turn the unit upside down.

25. Fasten the top and bottom together with the remaining six Phillips head screws.

26. You're done!!! Find a monitor cable terminated with four phono plugs and you're in business.

Radio Shack has such a cable. Black-audio, red-luminance, yellow-chrominance, white-composite but unused with a split video monitor like the Commodore 1702.)

On the chance that your cable is wired differently, some experimenting will be necessary to find the right hookup. Plug the din connector end into the 1200XL monitor jack. Turn on the 1200XL and run a disk or cartridge program that uses sound.

a. Find the audio plug by sequentially plugging each plug into your monitor's audio input jack. MARK IT!

b. Find the luminance plug by sequentially plugging the remaining three plugs into your monitor's COMPOSITE VIDEO jack (not the luminance jack). You'll know you have the right plug when you get a monochrome picture. MARK THE PLUG and move it to the monitor's luminance jack.

c. Find the Chrominance plug by sequentially plugging the remaining two plugs into your monitor's COMPOSITE VIDEO jack (not the Chrominance jack). When you get a fine color picture, MARK THE PLUG. That is the composite video plug. It remains unconnected.

d. The remaining plug carries the chrominance signal. MARK IT. Connect it to the monitor's chrominance input jack.

Seriously, if you have trouble, leave electronic mail for me at:

GEnie - CHARLEKOONTZ
CompuServe - 74206,3444

Atari Comdex Report Part 1

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Comdex Overview: A Wealth of Items to Report On
By Darlah J. Pine and Sandy Wilson

Comdex is an exciting time of the year for the computer industry. Darlah's excitement started when she packed her hard drive the morning she was to depart. "I always wonder if Comdex will be worth it this year, if I should have gone," she said. "It turns out this year it was well worth the trip."

Though Atari was in the Gold Room away from direct activity, there was a steady stream of people milling in the room. [The stream may get

heavier tomorrow. Rumor has it that Fleetwood Mac will be playing in the Atari booth Wednesday, November 16.]

We will try to fill you in on everything that was at the show though we probably won't remember it all. Atari didn't show any new machines except for a glimpse the day before of the portable, but there was a tremendous number of items to see.

Atari Corporation was showing Microsoft Write again as well as Ultrascript. Ultrascript is a Postscript-compatible interpreter used for printing files with the Atari Mega and Atari Laser only at this time. For now, you have to save the file to disk in Postscript format and then run Ultrascript. Softlogik is looking into bypassing this extra step in order to send directly to the laser. Ultrascript should be available in early 1989. No suggested retail price was available.

There were several desktop publishing programs being shown. Softlogik was showing its just-released Pagestream, and Timeworks was showing its full line of products with nothing new. Atari was showing Deskset, its high-end desktop publishing program. Though being displayed, it still needed final touches and the manual was not even off to the printer. Guesstimate for arrival on the market is "real soon now." We all know what that means.

Calamus, from ISD Marketing, will be shipping immediately after Comdex. As an avid user of Pagemaker, Darlah was impressed to note the similarities and differences. In a recent article in Personal Publishing Magazine, users were asked for their wishlist for Pagemaker. The amazing thing is that Calamus has four out of five things on that wishlist. "In my opinion," Darlah said, "this is a must-have product. I have to admit that I am sorry now for not waiting for this product before jumping on the bandwagon to buy Pagemaker at a much higher cost." Suggested retail is $299.

As previously mentioned, there was very little in the way of new hardware from Atari, but there was a bit of confusion. Atari showed a rather large, very alpha laptop computer for a very large lap indeed. Or at least that's what was displayed the day before the show. At the last minute, it was taken out of view. A couple of days later, though, Darlah happened to see

a more truly laptop-size model being shown privately to someone over in a corner. We don't know whether it was a working machine or a model, but it raised the possibility that a true laptop is on the way. There were three transputers up and running, with an occasional demo from the stage. The PC-4 and the PC-5 were also being displayed with no new information regarding when they would reach the market in the U.S.

The Graphics Operating Enviroment

From Total Control Systems Designer David R. Sullivan

If you are tired of hearing about the GEOS on the Commodore, the GEM desktop on the ST, and the desktop on the Macintosh, then this is the productor you! GOE, the Graphics Operating Environment from Total Control Systems, is THE desktop operating system for the 400/800/XL/XE/GS systems. First jus the facts, then I will give you my personal opinion.

GOE is a desktop user interface similar to the desktop on the ST and many other machines. GOE will be released on a 64k "super cartridge" about the first week of November, 1988. It uses icons to represent the disk drives, a trash can for deleting files, and different icons to represent the different types of files on a disk. GOE operates on all Atari computers, including the older models as well as the new XE Game System.

GOE supports windows that are resizable, slidable and movable. You can have up to 16 windows open at one time! There are drop down and pop up menus. The drop down menus at the top of the screen are definable by the user. This means that if you prefer to have the windows drop down when you point at the top of the screen with the mouse icon, it can be set up that way. However, if you prefer to have them only drop down when and if you "click" on the title of the menu, you can set up it that way. On the ST, the drop down menu stays on the screen, once opened, until you either click on an option, or drag the mouse icon to a blank section of the screen and click it to close the window.

With GOE you can decide whether you want to "click" to close the drop down menu or have it close automatically upon your exit from the menu.

In the desk accessories section, you have a control panel built into the cartridge, that allows you to set the screen width to 40 or 64 columns and define in which joystick port you want to use one of the following: joystick, mouse, koala pad, or touch tablet. You can also use the keyboard instead of any of the above.

The CX85 numberic key pad can also be used with GOE, instead of the number row on the keyboard or the mouse pointer to choose numbers. You are not limited to the arrow keys for directional control of the pointer with GOE, as you can define which keys you want to uses the controlling keys. Also you can set the color of the background and the color of the drop down menus.

There is a calculator included that allows you to do multiplicaton, addition, subtraction, division, square root, and percentage calculations. Of course there is also a notepad built into the cartridge that allows you to leave notes to yourself at almost any time.

When copying files with the ST you are allowed to "lasso" a group of files and then copy them all to a new disk. This is also allowed with GOE. The function keys are also used with GOE. The HELP key is used for online help comment boxes. The START key takes you to DOS. The SELECT key brings up the control panel and the OPTION key allows you to change controllers.

GOE works with the MIO, the ATR8000, the 850 and the P:R connection. GOE also works with any DOS, including SpartaDos X, MyDos, Atari ADos, Atari Dos 2.0, and more. Subdirectories, known as folders, are also supported.

GOE comes with over 45cons to choose from, built into the cartridge, with an editor on a seperate disk. Disk naming and comment storage for files is provided for use even with MyDos. Time/Date stamping is supported for SpartaDos users. Directories cane sorted, on the screen, either by name or file extender. GOE only uses 8k of memory for a 64k program.

If all this isn't enough, if your user group orders before October 28, 1988 you can get 10% off of an order of 5 or more GOE cartridges, 20% off of an order of 15 or more. Discounts must accompany user group presidents signature and information about the group's mem-

ber's: size, types of computers owned, etc. Suggested retail price is $79.95 but for a limited time, you can take the above discounts, with the restrictions mentioned above, off of the special price of only $50.00 which includes a coupon for goWrite and goPaint at a special low price. These two products should be out soon.

Now for my personal opinion of GOE versus the competition. There is no comparison! GOE is the best desktop operating system for the 8bit Atari available. ST jr. or Diamond, whatever the name, cannot compare to GOE.

The GOE demo does more than the released version of Diamond! GOE takes up only 8k compared to a disk based program that uses up the limited amount of RAM in the Atari 8bit computers. GOE works with all DOS's compared to Diamond only working with Atari DOS 2.0.

GOE is a very powerful easy to use interface for the novice or experienced user. It brings the ATARI 8bit into the 20th century. I have used it extensively, the demo version that is, and found it to be very easy to use and very powerful. I have loaded several terminal programs with no problem.

The demo goPaint and goWrite are exciting in what they promise to do. In all, I heartily endorse Total Control System's Graphic Operating nvironment by David R. Sullivan and urge you to send in your orders soon as possible! I did!

Total Control Systems 156 Tolowa Street San Diego, CA. 92117619

(Ed. Note: This product has been rescheduled for a mid-late November release. This known from the recent conference on GEnie.)

ST NEWS

A Faster ST ???

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before using this article.

Accelerating the ST Review by Byron Johnson (GLASS)

Just recently, I had to put my ST in the shop for repairs (I sure wish Atari had provided a connector for memory expansion) and borrowed another one from a friend. It made me realize how many improvements I had made to speed up the operation and make "computering" more enjoyable and productive. Perhaps you may benefit from my trials and tribulations in searching for the "Fastest ST alive."

First of all, let's concentrate on the existing features, then we'll move into the add-ons. The "Control Panel Accessory" is probably the best known ACC but the least utilized. Did you know that by changing the key repeat rate and key delay rate that you can speed up page and line scrolling within programs like word processing, database, spreadsheets, and telecommunications programs not to mention practically every other text-orientated program. The slider next to the "finger on a key" changes the key delay rate, useful for typing a row of dashes or moving across the page horizontally. The slider next to the rabbit and turtle controls "key repeat rate" and determines how many characters a second will be generated from holding down a key. Both of these keys need to be changed as your typing gets faster and you progress in this crazy game we call computing.

Next is the mouse double-click rate. It's the numbers 0 to 4 with the two mice next to them. It controls how fast or slow you can click the mouse and select an item. This also will change as your typing improves. Use a lower number to speed up the click select rate.

Whenever you first turn on your ST, you should always make a point of setting the date and time. This makes it easy to determine when you wrote a document and if it's a new or old version of a document. Since I use a monochrome monitor about 90 percent of the time, I like to reverse the colors, a black background and white letters. This is a lot easier on my tired eyes after staring at a monitor at work all day. With color monitors, using a medium blue, green, brown or black with a light color for text does about the same thing. Of course, after setting up the system the way you want, be sure and save the

desktop for your next session. I sure wish this would work on the IBMs at work!

Now for the real goodies. Let's start with Universal Item Selector Version 2. When you run a word processor program, a file selector box will pop up on the screen and ask you for a file name to load or create. If you need a file from another drive, you have to click on the path line above the box and retype the line to access another drive. This gets to be a pain in the neck after a while. With Universal, just click the new drive letter, and it gets the directory for you with a single click. Plus it's faster than the built-in selector because it's written in assembly language. It also adds dozens of new and easier to use commands like MOVE, PRINT, RAM FREE, FIND, LOCK/UNLOCK FILES, and better disk formatting commands, etc. For eighteen dollars, it's a steal. You won't believe how much improved the ST is with this one.

Next is Turbo ST Version 2. This is a optimized version of existing text routines written in assembly language. Once again, much faster response and improved operation from this 41 dollar program.

If you do a lot of printing, then a external hardware print buffer is a natural. This will allow you to print documents, text files, readme files and so on without tying up the computer. This one add-on feature alone will increase your productivity many times over. Even if only printing mailing or disk labels, or occasional doc files from the desktop, this buffer keeps you thinking and involved with your computer instead of waiting for a print-out to end.

The newest program in my auto folder is Mouse Doubler. It doubles the movement of the cursor, so you don't have to move the mouse as far as you used to. The little guy really moves! Next is a ram disk to speed up archive and unarchive operations, run compilers for programming languages, view slides very quickly and so many more applications. Many fine public domain ram disks are available, my favorite is STI_RAM from ST Informer Magazine. This software creates a disk drive of any size in RAM memory. Assuming you have enough memory to run it (one megabyte usually needed).

If you've read this far,

maybe a hard drive is in your future. Programs will load typically in four seconds not the usual twenty seconds from a 3.5" micro drive. Files also save much faster to a hard drive. The organizational capabilities keep all your regularly used software at your fingertips. Practically no time lost looking for a disk, plus you can configure the program just the way you want it and add on public domain upgrades and additional features without running out of disk space.

AND don't forget about the new TOS (Tramiel Operating System) due out this fall from Atari. I hear it's already available to developers, and is the first significant improvement made to the ST since TOS was put on ROM (Read Only Memory). Here are some of the planned improvements: 1. files may be moved 2. folders may be renamed 3. the 400 file limit is gone 4. file copying with a single drive now uses all available memory 5. the file selector box has been improved 6. the 40 folder limit is gone 7. the File Allocation Table (FAT) works much faster 8. a soft boot has been added (cntr/alt/del) to the keyboard 9. a hard boot has been added (cntr/alt/right shift/del) and many more changes to improve the speed of TOS and eliminate bugs and oversights of original design.

In the future, the Turbo ST folks are working on a graphics version of Turbo ST to speed up GEM functions. With the present success of the text version, I can't wait for the graphics version. It's going to be dynamite! As for Atari's blitter chip, where is the blitter chip? Private developers are improving the ST far beyond Atari expectations of what the ST could become. I wonder if Atari will ever optimize and rewrite the operating system in assembly language, add multitasking, improve the hard drive capabilities (expanding the partition limit from 4 to 12 or more), expand the partition size from 16 megabytes to 32 megabytes, add better built-in sound, better graphics, a faster microprocessor, plug-in memory expansion modules and a math co-processor?

Oh well, I can hope, can't I?

October 21, 1988 Contact: Ron Schreiner (312) 520-8003 RONSAT Technologies Inc. 368 Lexington Drive. Buffalo Grove, IL. 60089

STonehenge--Atari ST

Memory Expansion Alternative.

A solid state disk drive for the Atari ST is now available as a kit from RONSAT Technologies Inc. The STonehenge kit, based on an "Application Specific Integrated Circuit" (ASIC), emulates a hard disk by interfacing the ST's DMA port with a block of DRAM.

The STonehenge advantages over internal memory expansion include; ability to utilize lower cost 200 nano second DRAM parts; memory expansion in 256KB increments (8 DRAMs/bank); does not depend on the ST's power supply; it's external, you don't take your ST apart; data is preserved even though a ST power cycle.

When the kit is fully assembled it provides up to 2 meg of very fast external storage. If you need more that 2 meg, the DMA pass thru feature can be utilized to dasiy chain more kits or mechanical hard drives.

Software developers will find that STonehenge's speed and after crash data integrity make it a very attractive place to keep their development tools. Animators will enjoy STonehenge's ability to sequence image files at animation rates.

The STonehenge kit priced at $169.95 includes;

STonehenge ASIC Double sided PCB 20MHZ crystal DB-19 connector Documentation Software PGA socket for the ASIC

The Documentation and Software can be ordered separately for $10.00 (refundable with future purchase).

The builder of the kit must provide the DRAMs, a 5V 2A power supply, and a few miscellaneous components that are readily available from electronic suppliers.

Additional support kits that provide all the components are also available.

For more information or to order contact:

RONSAT Technologies Inc. Voice: (312) 520-8003 Modem: (312) 520-7812

Orders placed by modem receive a 5% discount. Dial-in (312) 520-7812, hit carriage return <return or enter> until "Login: " is the prompt, then enter "info"<return>.

WORDPERFECT EXTENDS ATARI USER GROUP BARGAIN DEADLINE

WordPerfect Corporation announced September 29, 1988 that they are extending the

deadline on their special discount to Atari user group members.

The special offer allows user group members to purchase WordPerfect for the Atari ST for only $155, a saving of $174 off the list price of $329. Originally running only through the end of September, this promotion has now been extended through December 31, 1988 -- an added incentive to holiday buyers, according to WordPerfect Corp.'s Todd Ashman.

User group members must show proof of Atari user group membership to be eligible for the special offer. All Atari WordPerfect orders qualifying for the special price must be accompanied by a WordPerfect Corp. user group purchase agreement, available from WordPerfect Corp.

Interested groups can call (800) 321-456 or (801) 227-5800 to request the user group purchase agreement, which must then be submitted directly to:

WP Corp. Atari Orders 315 N. State Street Orem, UT 84057

For more information about the ST version of WordPerfect, or the user group promotion, call (801) 225-5000.

WHAT IS GIF?

GIF a is graphics format common to all machines that read GIF. What this means to us is that we can all see the same graphic from ONE file. The format allows for 256 level color and BW gray level. This 256 level is refered to as "8 Bit" graphics. Your machine does not display 8 bit you say, well the Gif format will show you the graphic as your machine can see it.

I strongly believe in giving credit where credit is due. GIF is a format copyrighted by Compuserve, and they have placed it in the Public Domain. I want to thank Compuserve for the GIF format (even though Im a sysop on GEnie) because it serves a need that we have, and it does a good job. As to what machines do the best job, let me say this: I have seen GIF on Mac SE & Plus, Mac II, Atari ST, MS/DOS EGA,VGA and Super VGA. I have also seen Amiga Gif on my Mac II. There is a lesson to all of this ...Dont judge one machine from what you see on your Screen. Obviously the systems that can show the full 256 levels (8 bit) show up the best.

The best displays I have seen by far are the Mac II and

Super VGA. Next would come the Amiga (5 bit), then EGA. IF you are viewing on an SE or Plus, you really should stick to the MacPaint conversions (which we will discuss soon). On the EGA and other 16 color (4 Bit) machines, you will see a good image but wont be able to figure out why the rest of us are raving. To our ST friends, the ST GIF I have seen was not super good, and I assumed it was under the potential of the ST; therefore I THINK its a software problem and thereby fixable.

The quality of a Mac II and super VGA is reasonably close to that of a photograph. While the topic of 24 bit graphics will soon come up, GIF does not at this time support that high of grahics. Besides, the file transfers would be unreasonalbly long due to size of the files. A 24 bit file of 5x7 size (75dpi) is 544 K before compression, while an 8 bit of the same resolution is 181 K.

HOW TO GIF

How to Gif? Easy! All you need is a viewer and/or converter. A viewer is written for your machine and will open the GIF file. Many times it will convert that image to a graphics format common to your computer system. So all you really need is to download a file and have your viewer open it for viewing and possible conversion to your favorite graphics format. Where do I get these programs? Another good question!!

We have all the files you need for most popular systems. Following is a list of file on the Photo RT Library that you may download at your convience.

878 CSHOW5.ARC Desc: CSHOW VER 5.0 GIF VIEW FOR IBM 751 PICEM.ARC Desc: GIF Viewer for IBM Computers

750 VGAGIF34.ARC Desc: GIF viewer for IBM VGA cards

641 AT8GIF.DOC Desc: documentation for AT8GIF.OBJ

640 AT8GIF.OBJ Desc: view GIF on 8 bit Atari computers

584 SHRCONV2.1.BQY Desc: update,view GIF on Apple IIgs

570 AMISTRIP.ARC Desc: STRIPS 1ST 128 BYTES OF MAC GIF

559 GIF QUESTIONS Desc: A MUST file for GIF users.TXT

557 MACGIF STRIP 4 ST Desc: MacGIF stripper for ST!!

554 HAMGIF.ARC Desc: View 256 color GIF files on Amiga!

553 AMGIF.ARC Desc: Convert Amiga pics to GIF format

377 MAC.STRIPPER.BQY Desc: Remove Mac headers, for Apple //

375 IIGIF.BQY Desc: View GIF pics on Apple //+,//e,//c

374 SHRCONVERT.BQY Desc: View GIF pictures on the Apple IIgs

369 STIPGIF IBM.ARC Desc: IBM utility to view Mac GIF!

330 GIFCONVERTERDEMO Desc: Converts GIF files for SE/Plus view

321 GIFFER10.SIT Desc: Display GIF pictures on Macintosh.

320 GIFSHOW.ARC Desc: Display GIF pics on ATARI ST only.

319 TIGIF.ARC Desc: Display GIF on TI PRO computer.

298 CNVGIF.ARC Desc: Converts DEGAS and NeoChrome to GIF

297 GIF.ARC Desc: Converts Spectrum 512 Pics to GIF

296 CSHOW.ARC Desc: Gif viewer for IBM & compatibles

295 GIF SPECS.ARC Desc: GIF specs archived

The subject of "Stripping" must also be mentioned. When a Mac is the source of the image, that system adds some information to the top of the GIF file. With this added information used only by the mac system, other Gif systems will not reconigeze the file as a GIF and will not open it. Most systems now have strippers that take off this information. Therefore IF, you have a GIF file you can not open, try a stripper on a COPY of the file. This is only true for source files from MAC systems! (More on this subject in the next topic.)

EPHOTE GIF

Anyone may upload GIF files or anyother format of photos and art. GEnie rules of ratings on the sexual nature of the files is enforced. If you have questions as to what this policy is, please Email the questions to EPHOTE. On the subject of "Stripping", scans from the PHOTO RT are done on a Mac II. While the older files do need stripping, the new files do not. Confused? Well if you see the words "pure GIF" the file will not need stripping. As a general rule, any file uploaded after 10-1-88 by EPHOTE will not need stripping. Thanks to Fritz Kass of INFO CENTER BBS, for showing us how to take out that Mac header. If you are a mac user and dont know how to strip out the header, I have placed the proceedure in

the PHOTO RT Bulletin Board Category 15, or you can Email EPHOTE for the proceedure.

Bit versus Baud by Peter Vaughan

I'm a telephone engineer. I get involved in the "bit rate" of modems, as opposed to the "Baud rate". I was talking to someone recently about my SupraModem 2400 "Bits per Second" (2400 BPS) modem. He came back talking about 2400 "Baud". You all probably know that our "2400" modems operate at 600, not 2400 Baud. But, just in case anyone doesn't and is interested:

1) The Atari XM301 and 1030 modems operate at a 300 per second "bit rate". The Baud rate is also 300, because the modulation method is simple frequency shift keying. One bit of digital information from the computer results in one tone frequency being transmitted on the telephone line. The rate at which information enters the telephone line is called the "Baud rate". So the bit rate equals the Baud rate, and both are 300.

2) At a 1200 "bit rate", (for example the SmarTeam 1200, or the Supramodem 1200) the Baud rate is not 1200, but 600. In this mode of operation, TWO consecutive bits of digital data from the computer are examined together. Depending on what these two bits are, they are then converted into a SINGLE phase shift of the previous tone, and then transmitted. Again, the rate at which information actually enters the telephone line is the "Baud rate". So, it's two for one again, and the Baud rate is 600, being one half of the 1200 bit rate. This modulation method is called Differential Phase Shift Keying, or DPSK. At the receive end, the modem compares the PHASE of the signal with the previous phase. Depending on what that phase shift is, it demodulates into TWO unique bits of data. Hence the "two for one".

3) At the 2400 "bit rate", the Baud rate is still 600. The modem uses a modulation system called Quadrature Amplitude Modulation (QAM), which is based on the Bell V.22bis protocol. This QAM takes FOUR sequential bits at a time, and combines them into a SINGLE signal, which is a combination of phase and amplitude. At the receive end, this single piece of information is demodulated back into the original FOUR bits. So four bits of digital

information from the computer result in one transmitted symbol, and the Baud rate is 2400 divided by 4, or 600.

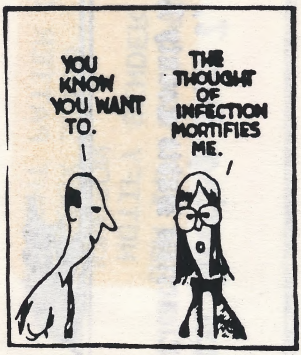
The reasons for reducing the Baud rate are twofold:

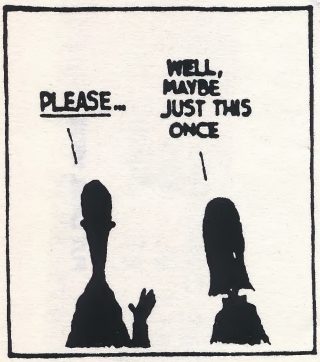
A) Stay as near as possible to the middle of the passband of the telephone line. Stay away from the high frequency roll-off. The lower you make the highest frequency of a signal on the line, the easier it is to send it hundreds, or even thousands of miles without excessive roll-off of the highest frequency components. (For example, my brother lives in England, and uses our Compuserve network. The one-way path is about 45,000 miles! The path includes his analog tones on a lot of copper wire, some pulse code modulated transmission on more copper wire, an up-down satellite path of about 45,000 miles, followed by the same landline travel at this end, to a computer in Ohio.)

B) With a low signaling information rate (that is, a low Baud rate), the duration of each piece of information sent is relatively long. So any momentary glitch on the telephone line is more likely to be too short to cancel the information, or change it in any significant way. The signal goes through, and the receiver demodulates it correctly.

I THINK WE SHOULD DO IT.
NO WAY. I HARDLY KNOW YOU.

COME ON, YOU ONLY LIVE ONCE.
SORRY, BUT THERE ARE TOO MANY VIRUSES OUT THERE.


YOU KNOW YOU WANT TO.
THE THOUGHT OF INFECTION MORTIFIES ME.


PLEASE...
WELL, MAYBE JUST THIS ONCE

SHELLEY
TRADING SOFTWARE IS SO RISKY THESE DAYS.

L. A. C. E.

BOX 553
Clearfield, UT 84067

SALT LAKE CITY UT 841 PM 1 DEC 1988

ALWAYS USE ZIP CODE

Membership expires - 01/31/89

Next Meeting: Dec. 7. 1988

Held At The Clear[illegible]

JOH 18 09025481 12/02/88
NOTIFY SENDER OF NEW ADDRESS
JOHNSON